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(71) Applicant(s)

Schlumberger Holdings Limited
(Incorporated in the British Virgin Islands)
PO Box 71, Craigmuir Chambers, Road Town, Tortola,
British Virgin Islands

(72) Inventor(s)

Johan Olof Anders Robertsson
Julian Edward Kragh
James Edward Martin

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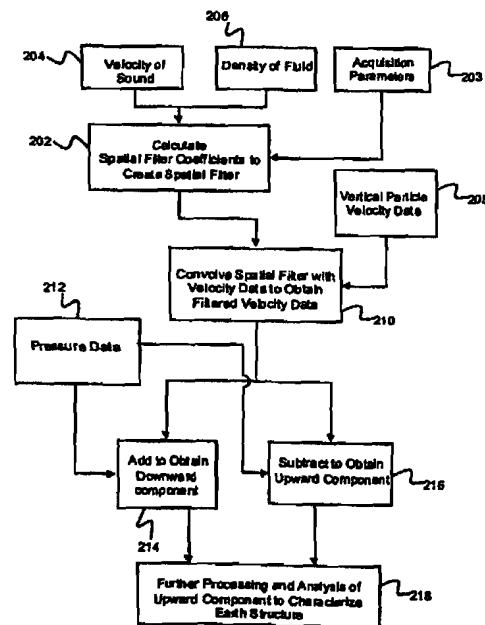
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(54) Abstract Title

Method and system for reducing effects of sea surface ghost contamination in seismic data

(57) An improved de-ghosting method and system that utilises multi-component marine seismic data recorded in a fluid medium is disclosed. The disclosed method makes use of two types of data: pressure data, that represents the pressure in the fluid medium, such as sea water, at a number of locations; and vertical particle motion data, that represents the vertical particle motion of the acoustic energy propagating in the fluid medium at a number of locations within the same spatial area as the pressure data. The vertical particle motion data can be in various forms, for example, velocity, pressure gradient, displacement, or acceleration. A spatial filter is designed so as to be effective at separating up and down propagating acoustic energy over substantially the entire range of non-horizontal incidence angles in the fluid medium. The spatial filter is applied to either the vertical particle motion data or to the pressure data, and then combined with the other data to generate pressure data that has its up and down propagating components separated.



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(74) Agent and/or Address for Service

Schlumberger Cambridge Research Limited
Intellectual Property Law Department, High Cross,
Maddingley Road, CAMBRIDGE, CB3 0EL, United Kingdom